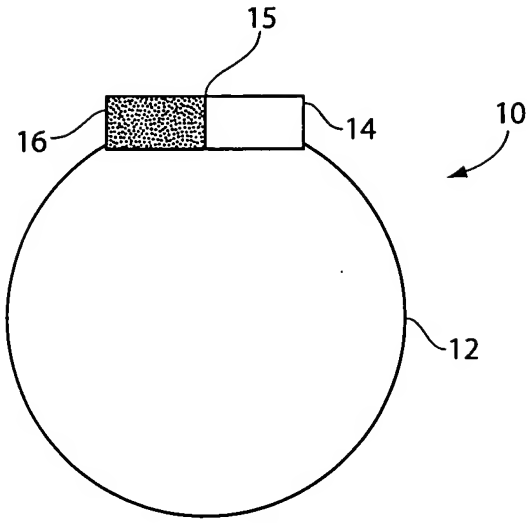


Fig. 1A

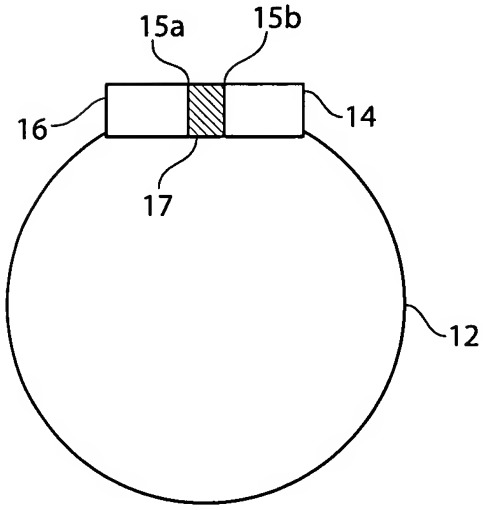
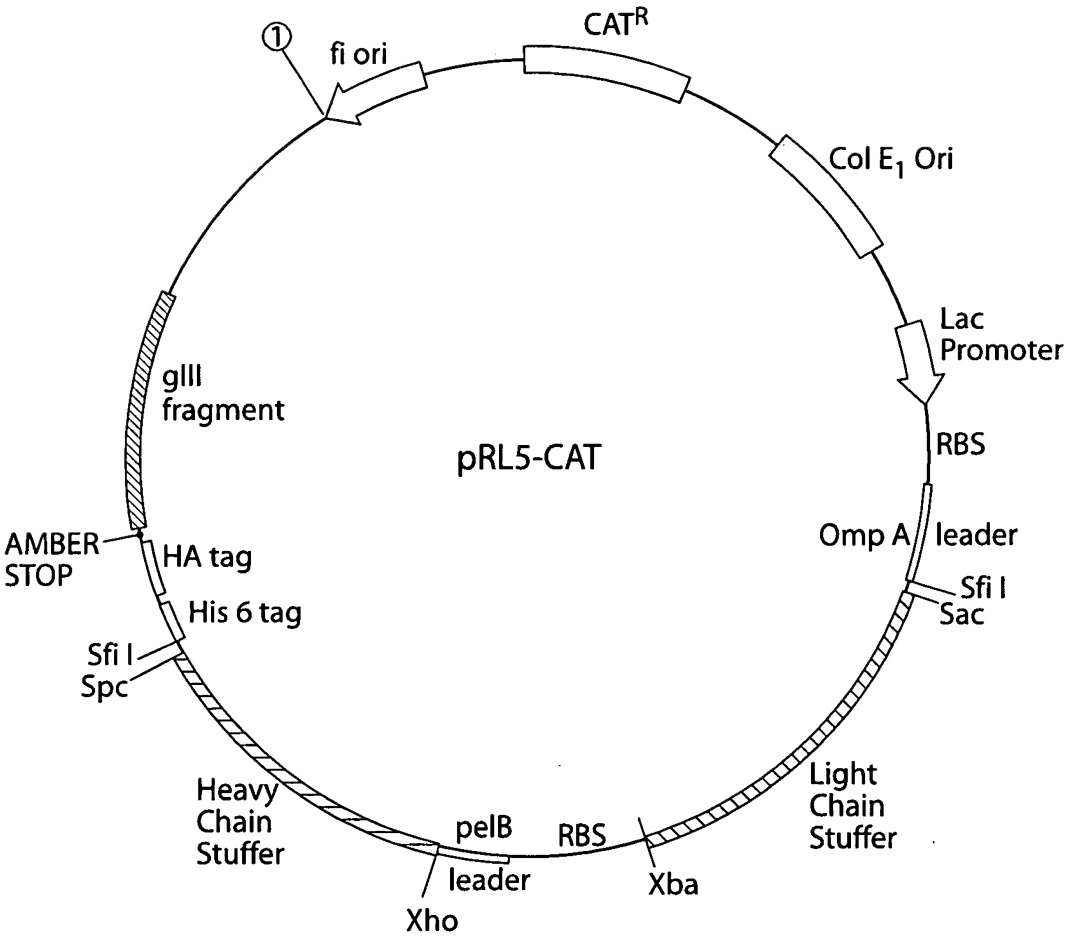


Fig. 1B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CAT^R
Col E$_1$ Ori
Lac
Promoter
RBS
Omp A
leader
Sfi I
Sac
Light
Chain
Stuffer
RBS
Xba
pelB
leader
Xho
Heavy
Chain
Stuffer
Sfi I
Spc
His 6 tag
HA tag
AMBER
STOP
gIII
fragment
pRL5-CAT

Fig. 2

PRL5-CAT

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Fig. 3A

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Fig. 3B

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TTTCTTTTATATGTTGCCACCTTTATGTATGTATTTTCTACGTTTGCTAACATA
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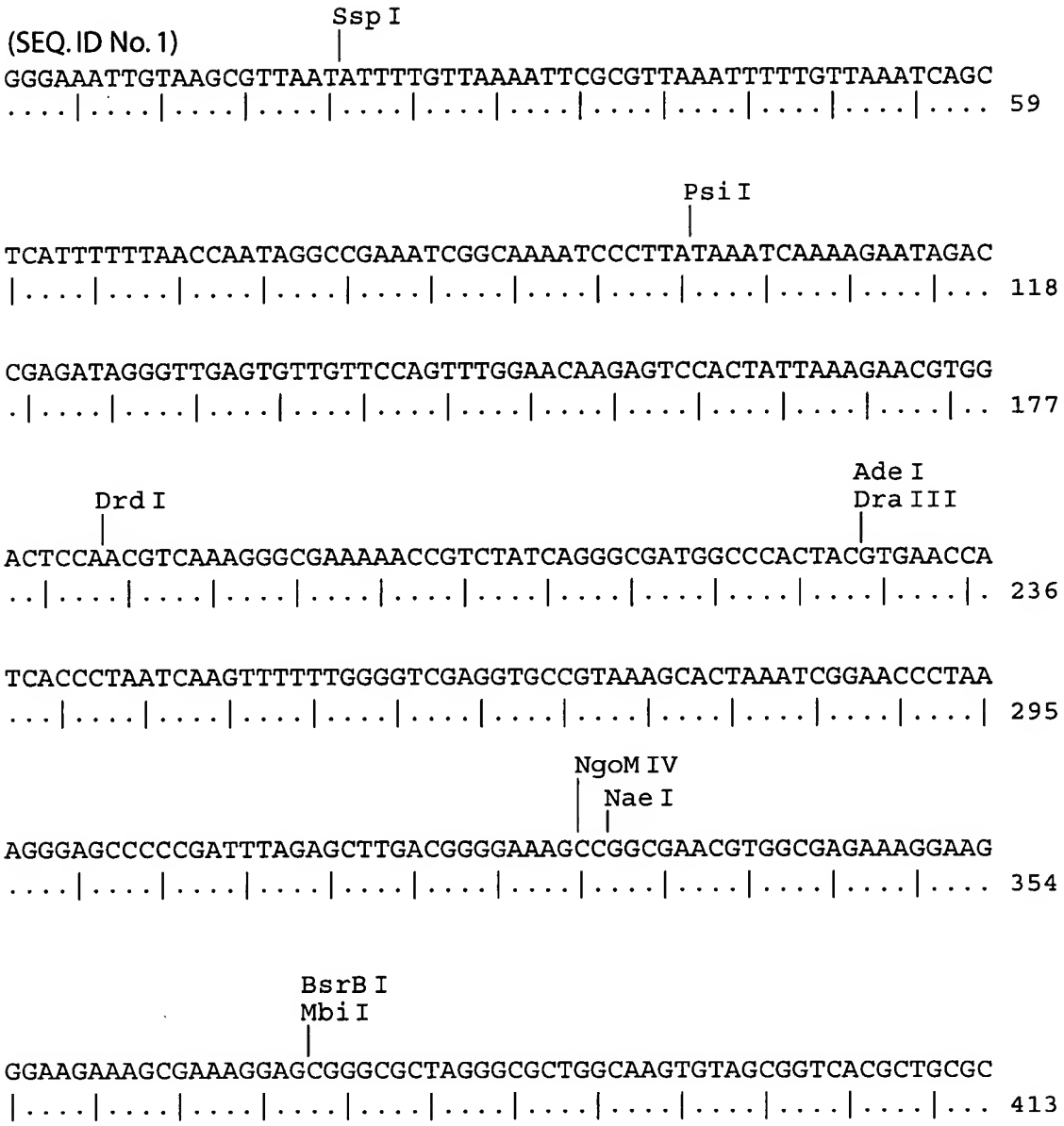
Fig. 3C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Ade I
Dra III
Drd I
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NgoM IV
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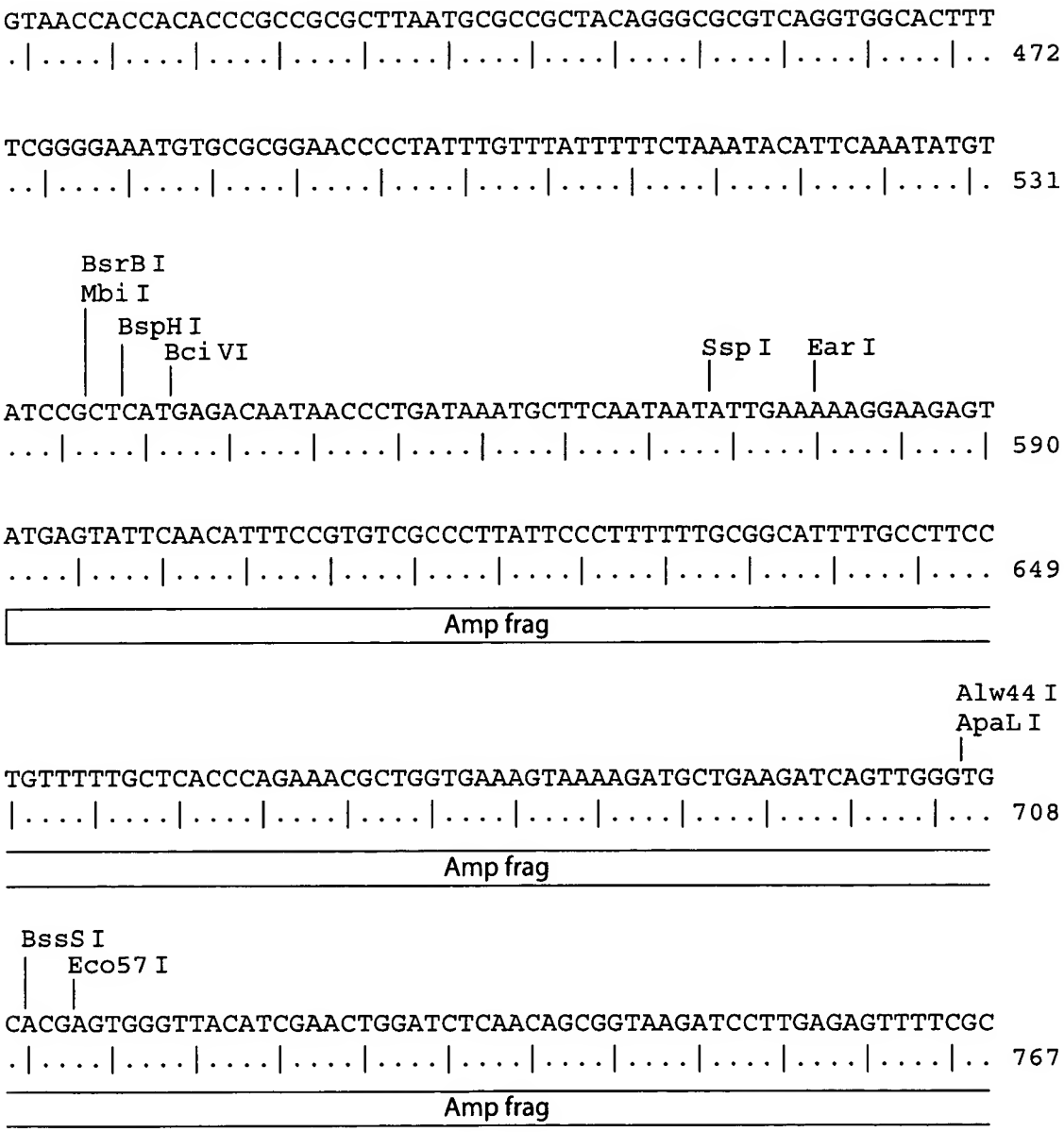
Fig. 4A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BsrB I
Mbi I
BspH I
Bci VI
Ssp I
Ear I
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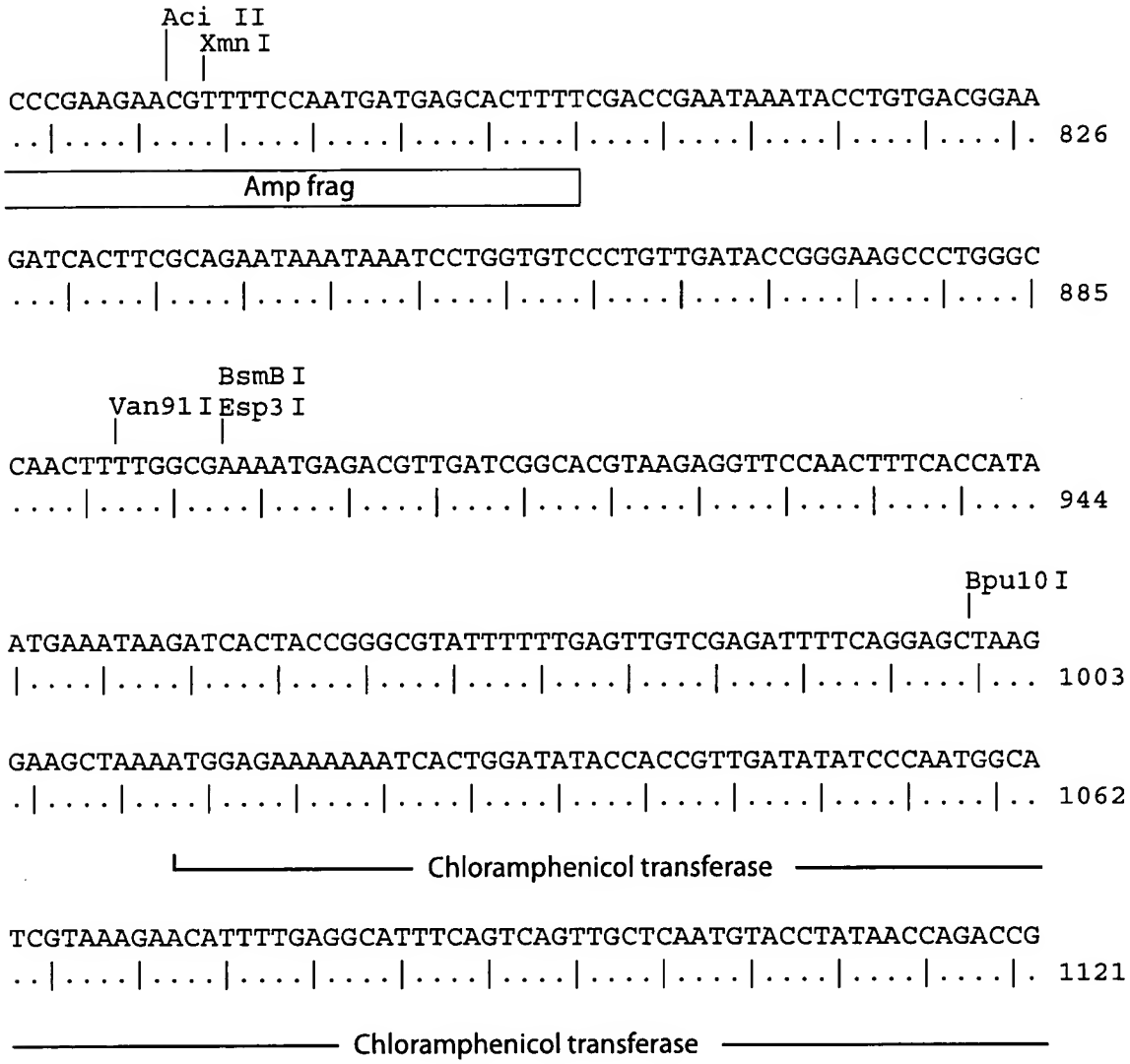
Fig. 4B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885
BsmB I
Van91 I
Esp3 I
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944
Bpu10 I
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1003
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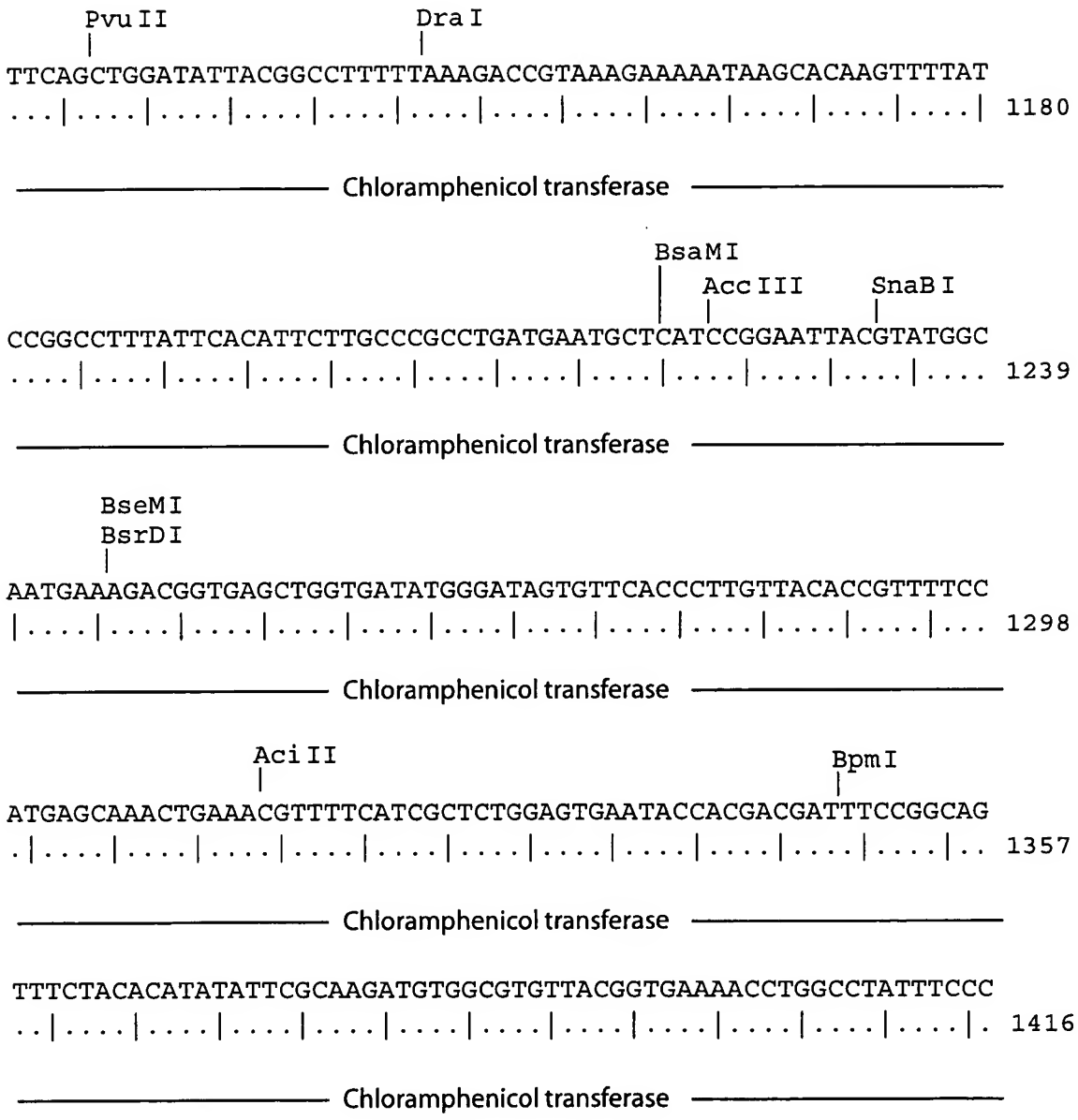
Fig. 4C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BsrDI
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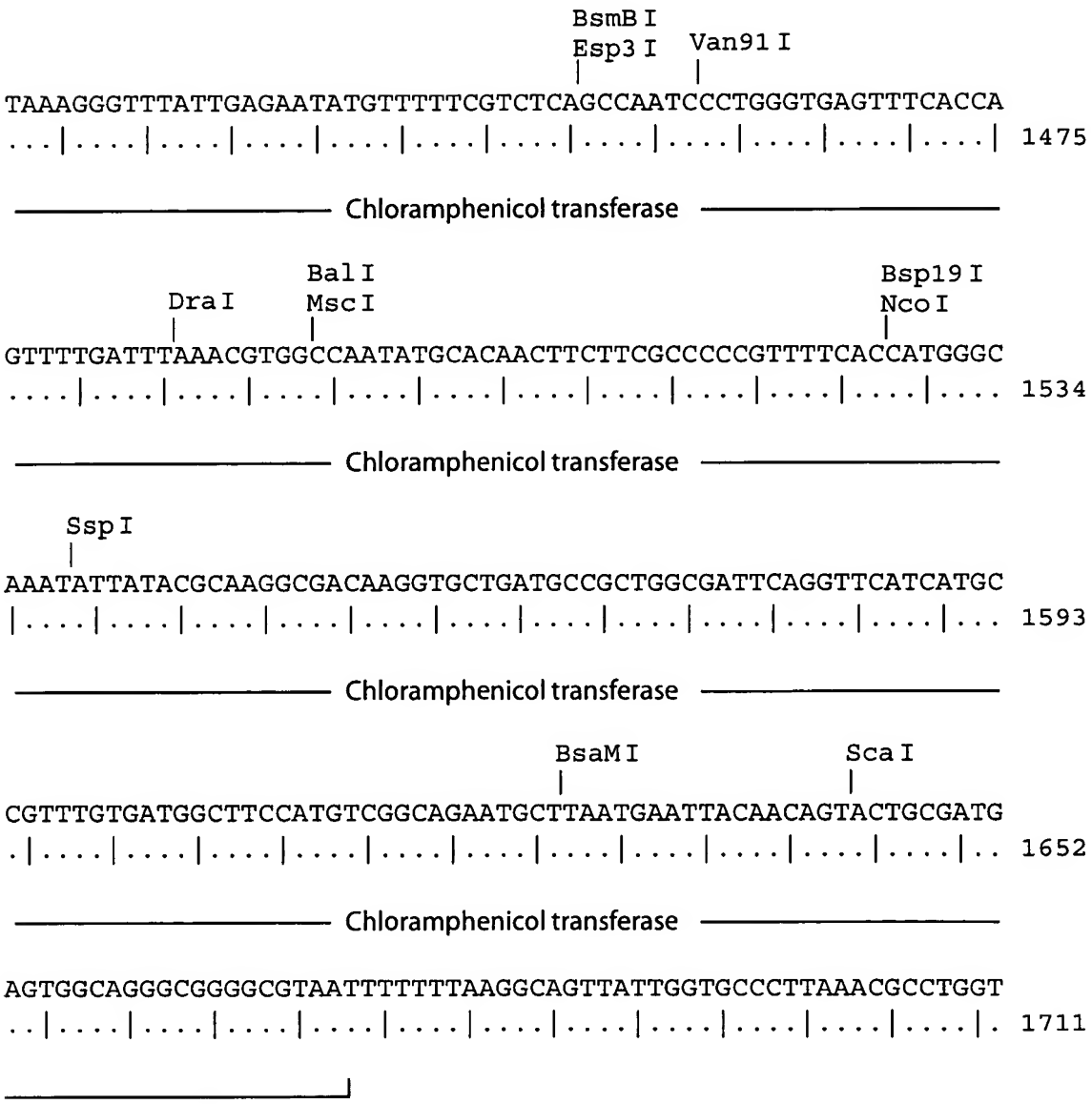
Fig. 4D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Msc I
Dra I
Bsp19 I
Nco I
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Chloramphenicol transferase
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BsaM I
Sca I
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Fig. 4E

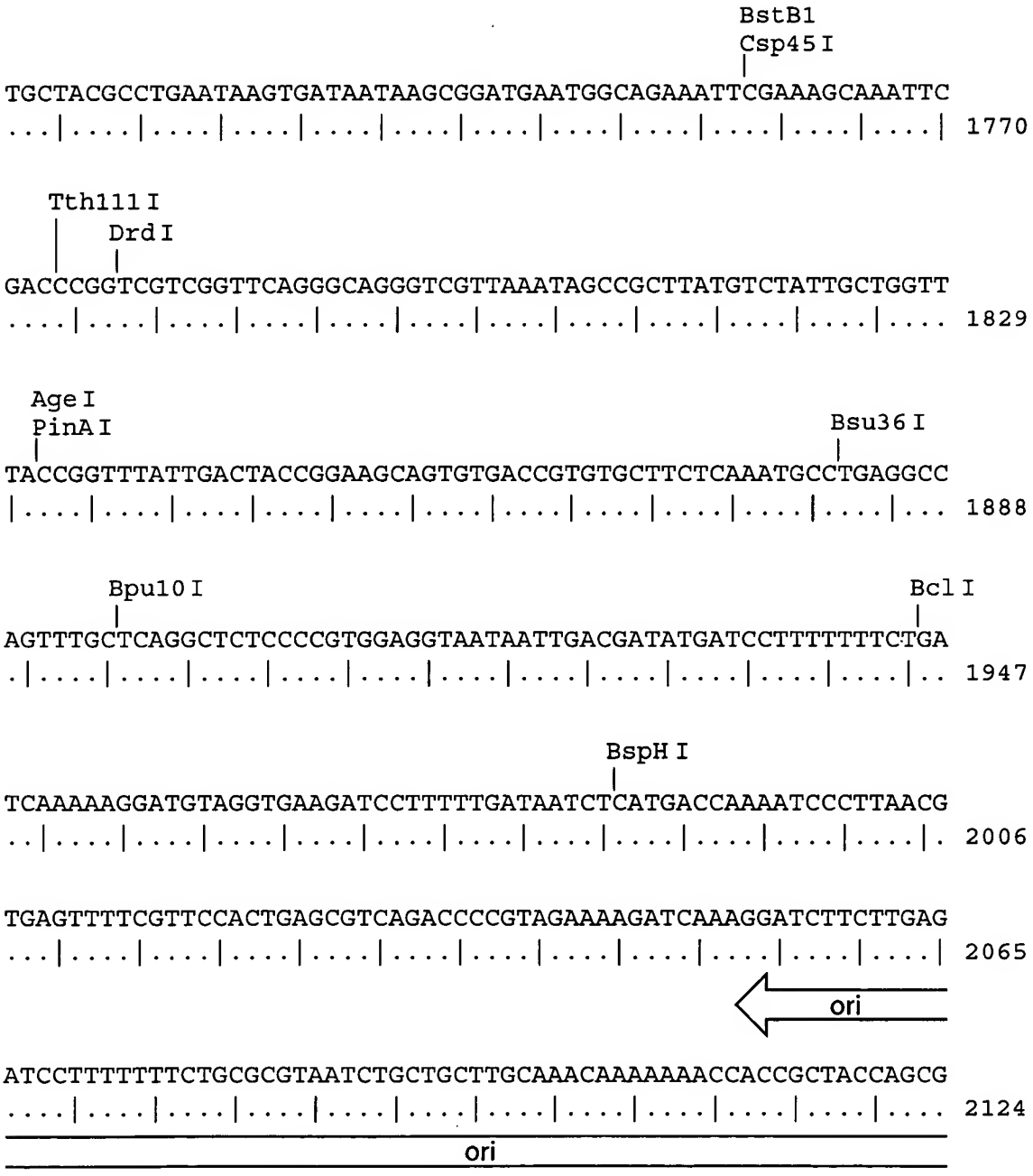
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Fig. 4F

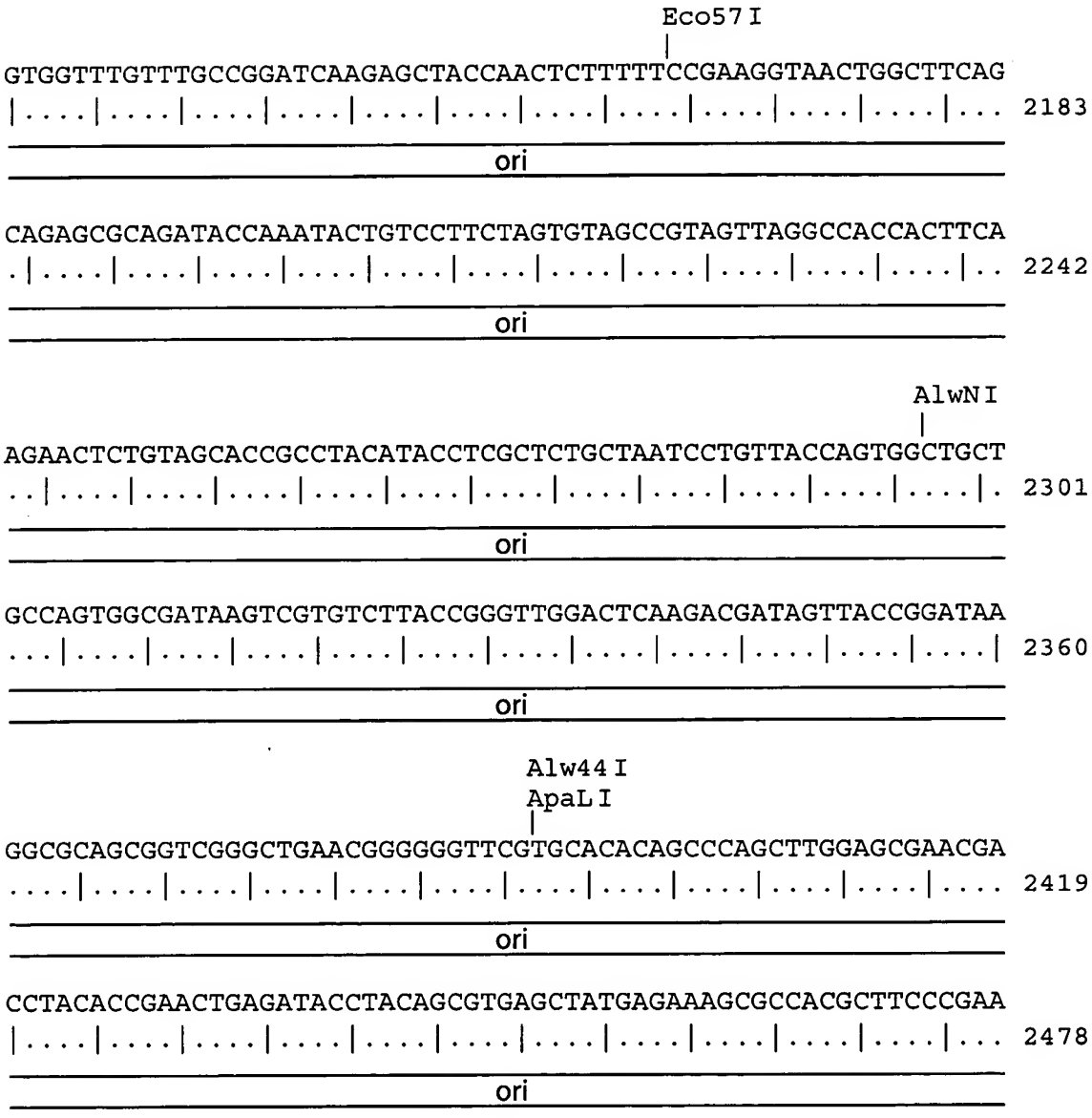
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Fig. 4G

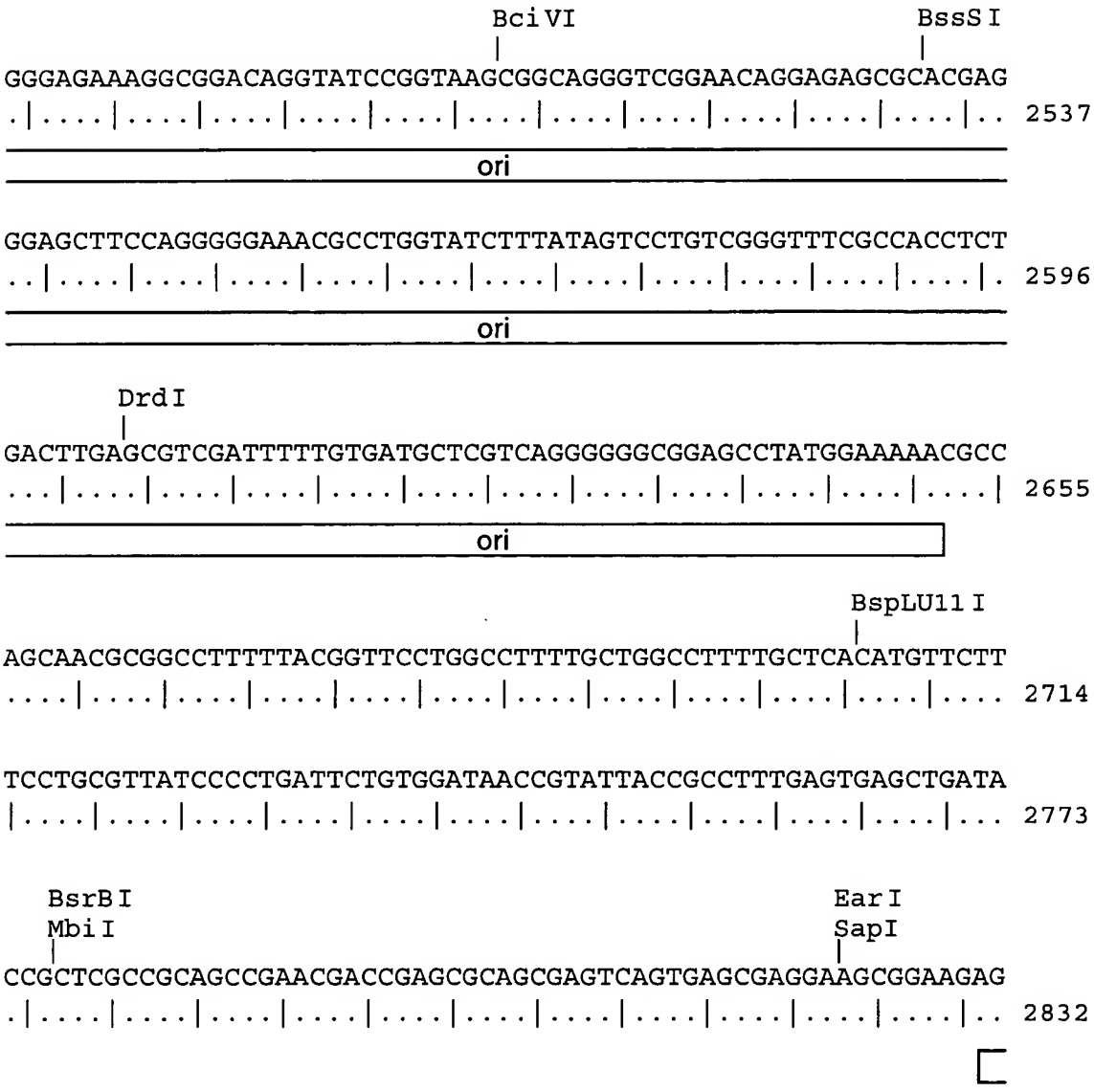
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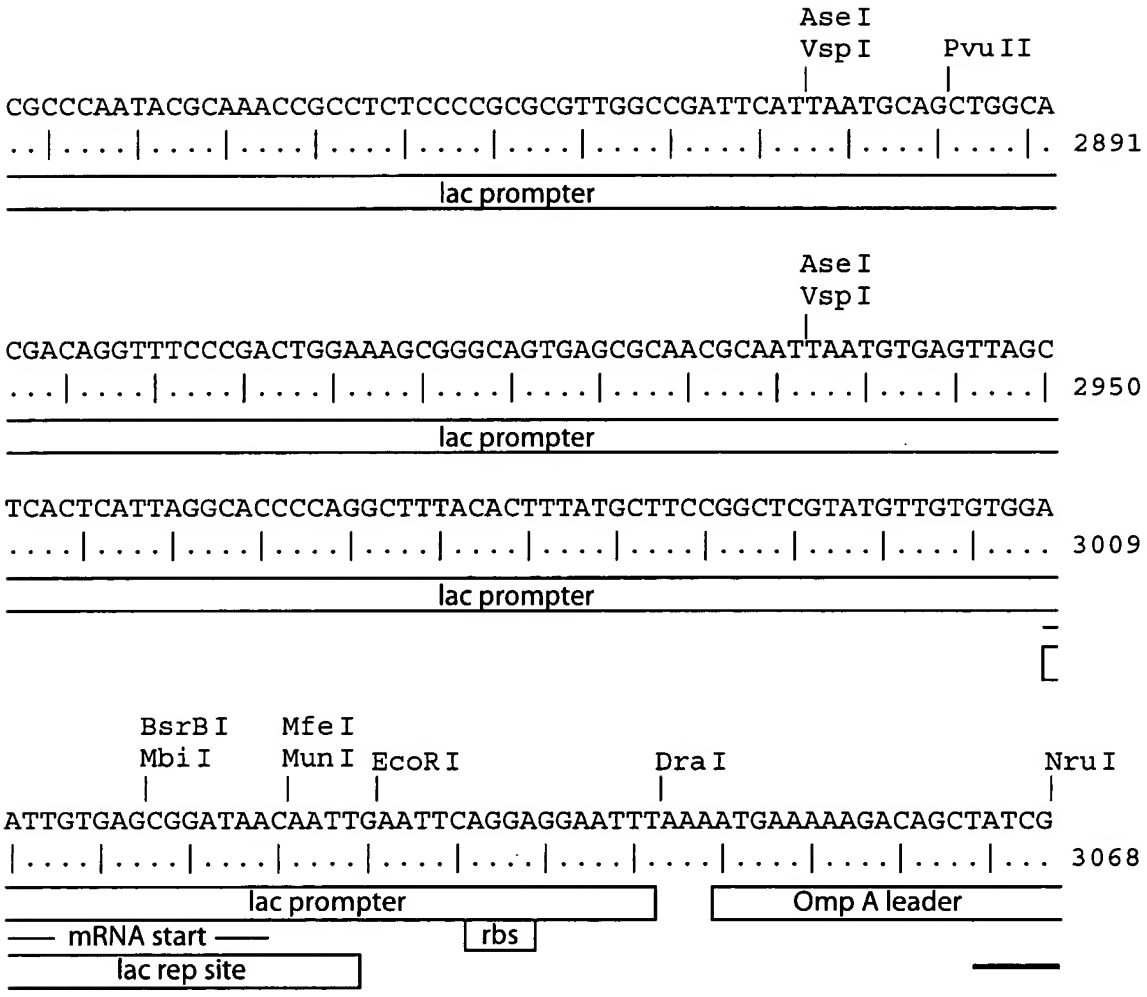
Fig. 4H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MfeI
MunI
EcoRI
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NruI
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Fig. 4I

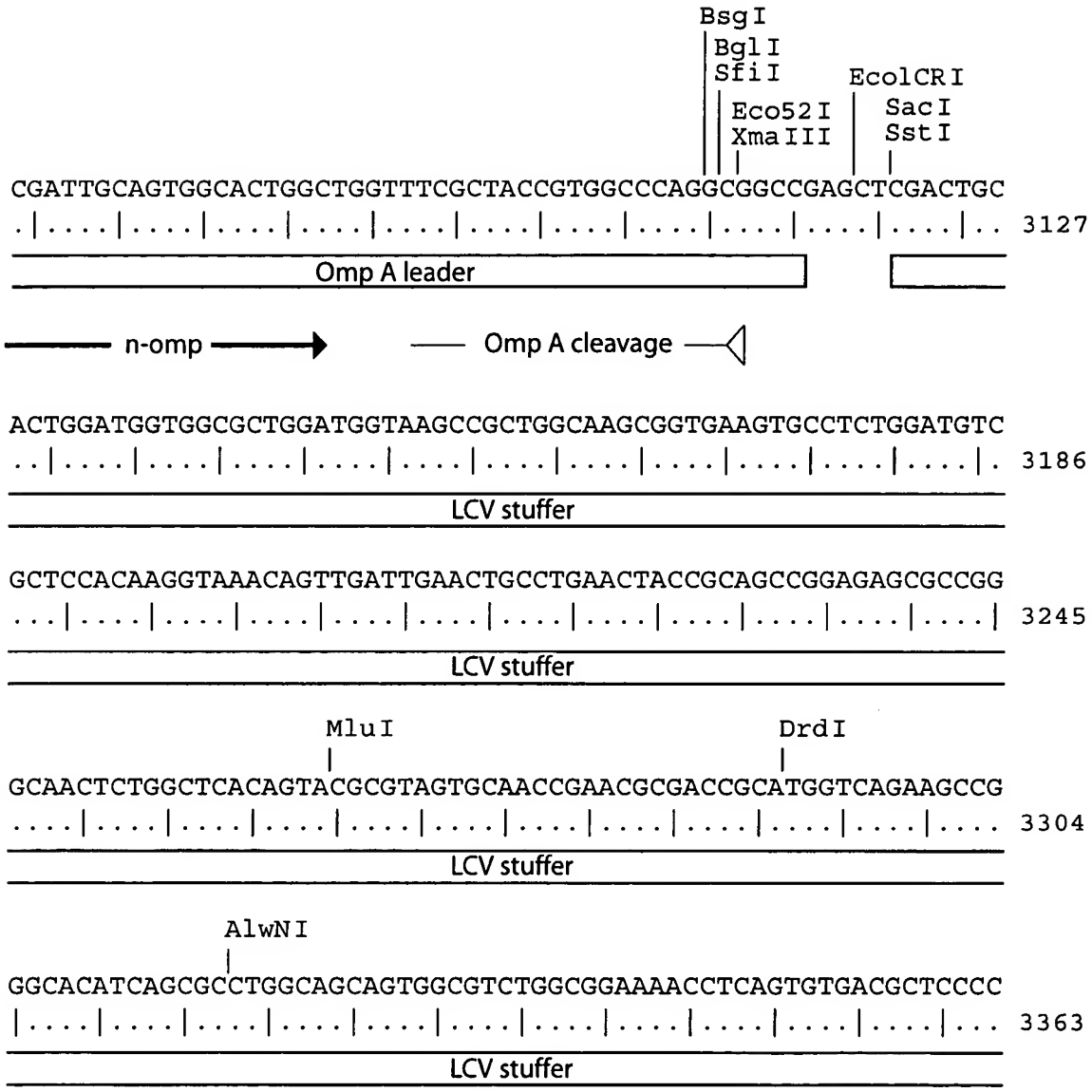
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Fig. 4J

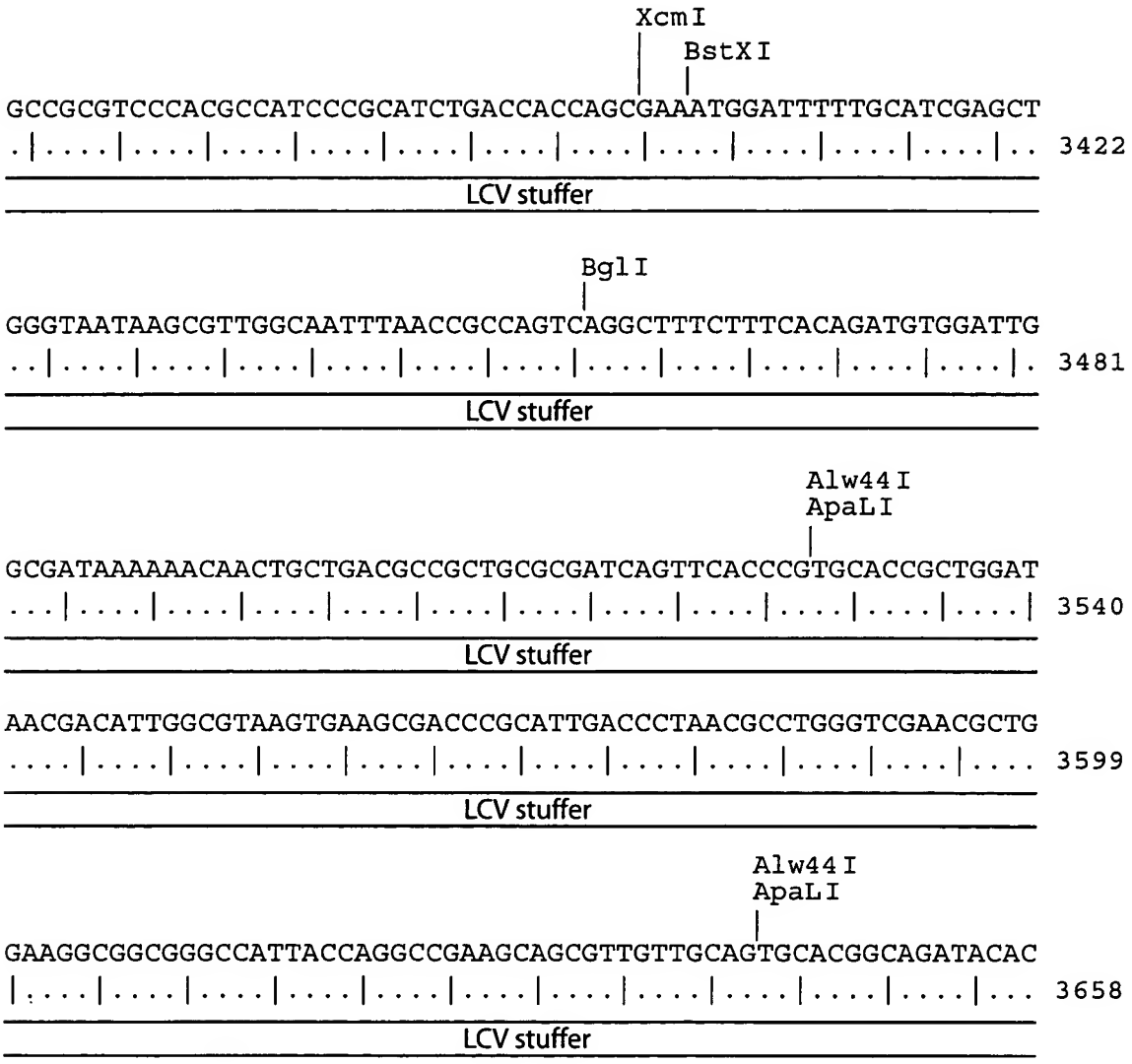
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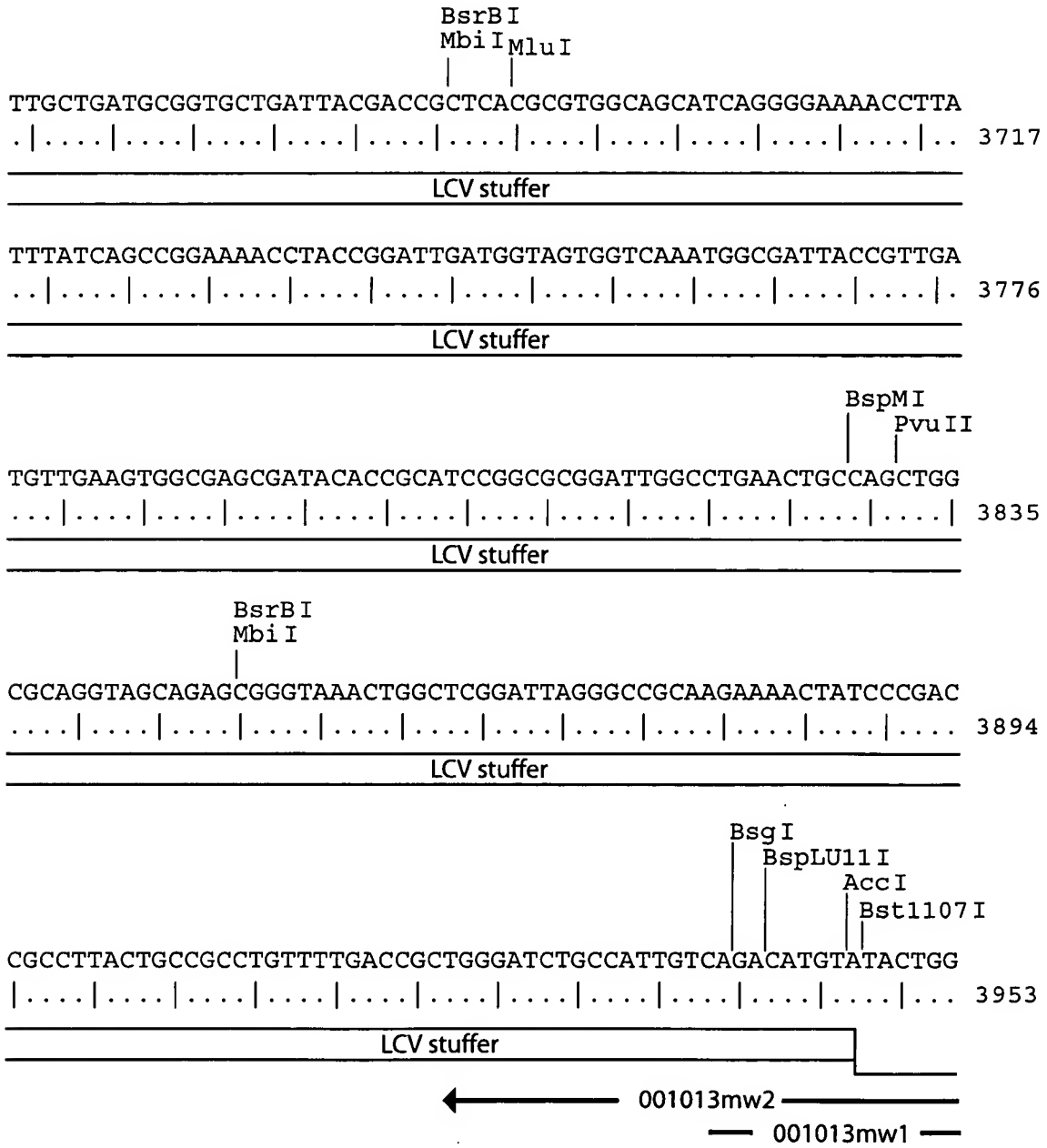
Fig. 4K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3894
LCV stuffer
BsgI
BspLU11I
AccI
Bst1107I
CGCCTTACTGCCGCCTGTTTTGACCGCTGGGATCTGCCATTGTCAGACATGTATACTGG
3953
LCV stuffer
001013mw2
001013mw1

Fig. 4L

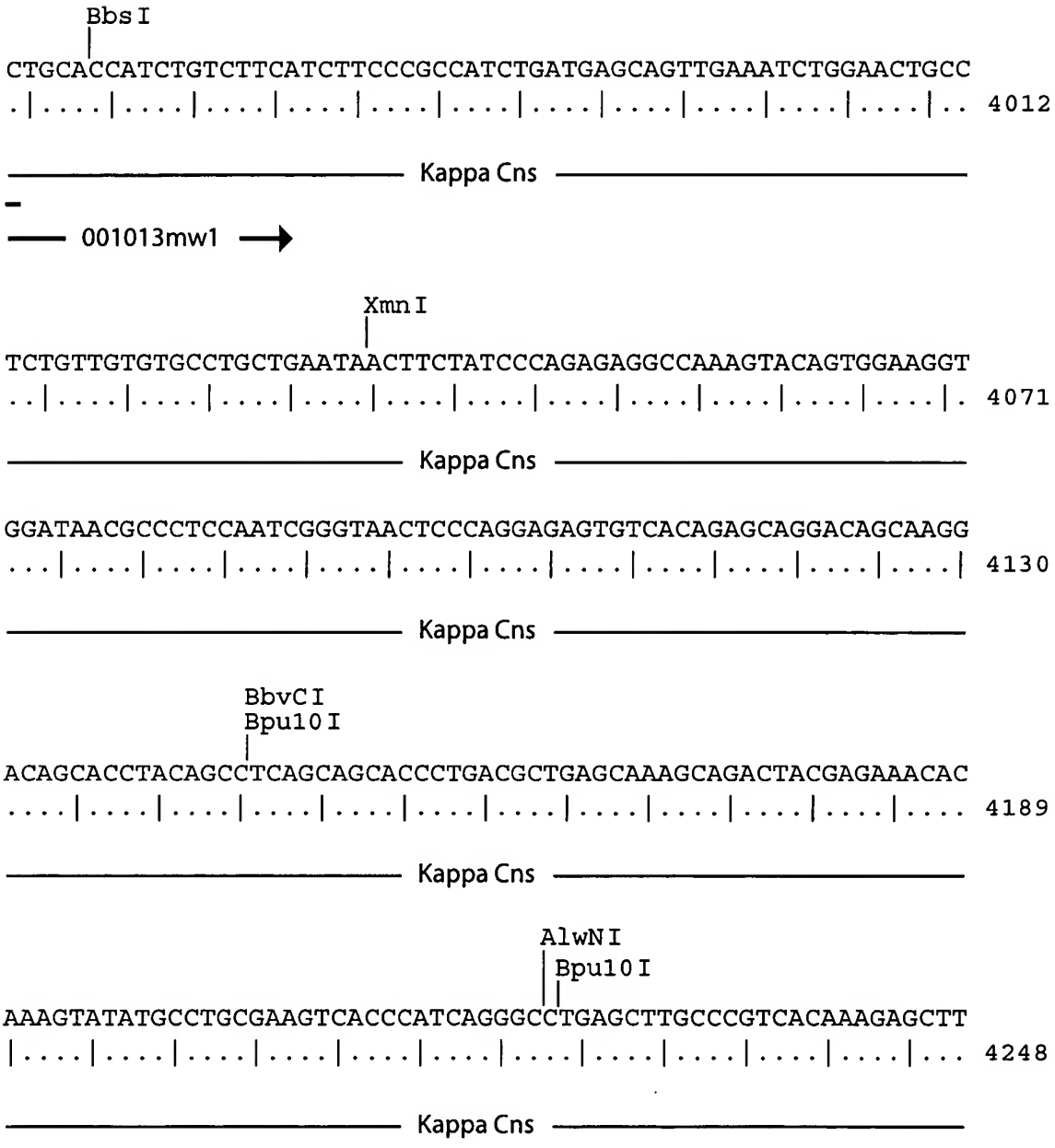
Bbs I
CTGCACCATCTGTCTTCATCTTCCCGCCATCTGATGAGCAGTTGAAATCTGGAACTGCC
4012
Kappa Cns
001013mw1
Xmn I
TCTGTTGTGTGCCTGCTGAATAACTTCTATCCCAGAGAGGCCAAAGTACAGTGGAAGGT
4071
Kappa Cns
GGATAACGCCCTCCAATCGGGTAACTCCCAGGAGAGTGTCACAGAGCAGGACAGCAAGG
4130
Kappa Cns
BbvC I
Bpu10 I
ACAGCACCTACAGCCTCAGCAGCACCCTGACGCTGAGCAAAGCAGACTACGAGAAACAC
4189
Kappa Cns
AlwN I
Bpu10 I
AAAGTATATGCCTGCGAAGTCACCCATCAGGGCCTGAGCTTGCCCGTCACAAAGAGCTT
4248
Kappa Cns

Fig. 4M

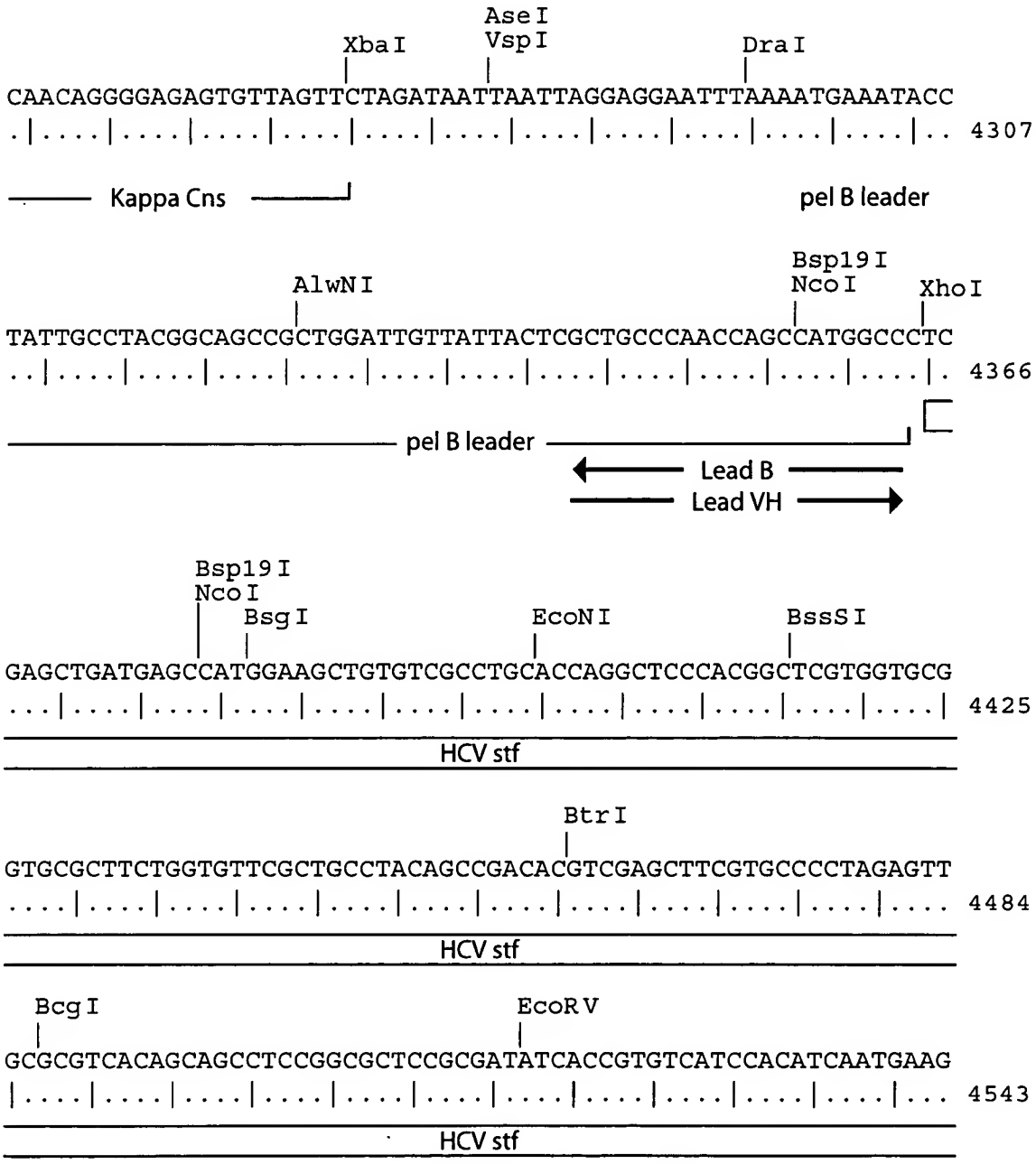
Ase I
Vsp I
Xba I
Dra I
CAACAGGGGAGAGTGTTAGTTCTAGATAATTAATTAGGAGGAATTTAAAATGAAATACC
4307
Kappa Cns
pel B leader
Bsp19 I
Nco I
AlwN I
Xho I
TATTGCCTACGGCAGCCGCTGGATTGTTATTACTCGCTGCCCAACCAGCCATGGCCCTC
4366
pel B leader
Lead B
Lead VH
Bsp19 I
Nco I
Bsg I
EcoN I
BssS I
GAGCTGATGAGCCATGGAAGCTGTGTCGCCTGCACCAGGCTCCCACGGCTCGTGGTGCG
4425
HCV stf
Btr I
GTGCGCTTCTGGTGTTCGCTGCCTACAGCCGACACGTCGAGCTTCGTGCCCCTAGAGTT
4484
HCV stf
Bcg I
EcoR V
GCGCGTCACAGCAGCCTCCGGCGCTCCGCGATATCACCGTGTCATCCACATCAATGAAG
4543
HCV stf

Fig. 4N

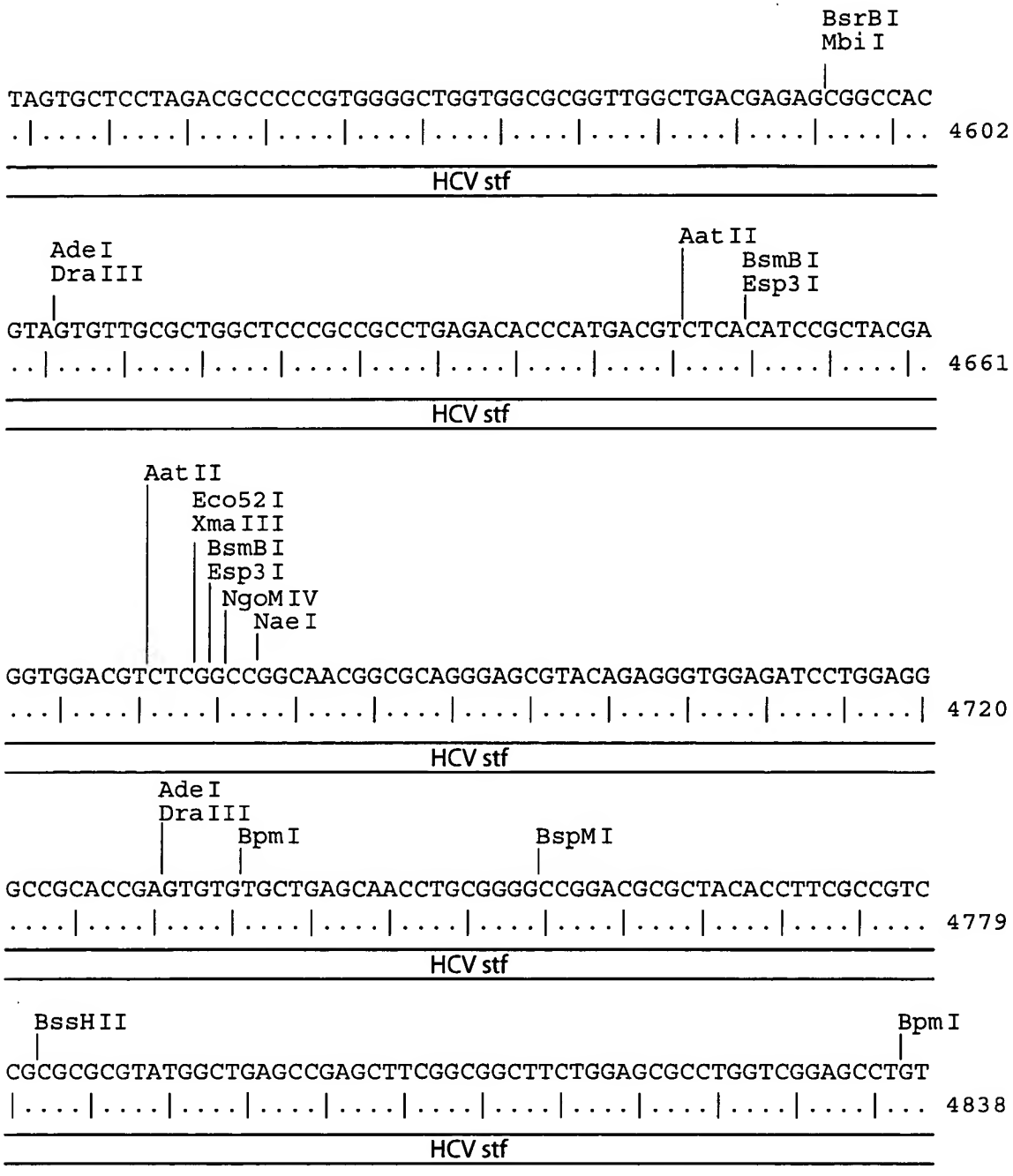
BsrBI
MbiI
TAGTGCTCCTAGACGCCCCCGTGGGGCTGGTGGCGCGGTTGGCTGACGAGAGCGGCCAC
4602
HCV stf
AdeI
DraIII
AatII
BsmBI
Esp3I
GTAGTGTTGCGCTGGCTCCCGCCGCCTGAGACACCCATGACGTCTCACATCCGCTACGA
4661
HCV stf
AatII
Eco52I
XmaIII
BsmBI
Esp3I
NgoMIV
NaeI
GGTGGACGTCTCGGCCGGCAACGGCGCAGGGAGCGTACAGAGGGTGGAGATCCTGGAGG
4720
HCV stf
AdeI
DraIII
BpmI
BspMI
GCCGCACCGAGTGTGTGCTGAGCAACCTGCGGGGCCGGACGCGCTACACCTTCGCCGTC
4779
HCV stf
BssHII
BpmI
CGCGCGCGTATGGCTGAGCCGAGCTTCGGCGGCTTCTGGAGCGCCTGGTCGGAGCCTGT
4838
HCV stf

Fig. 4O

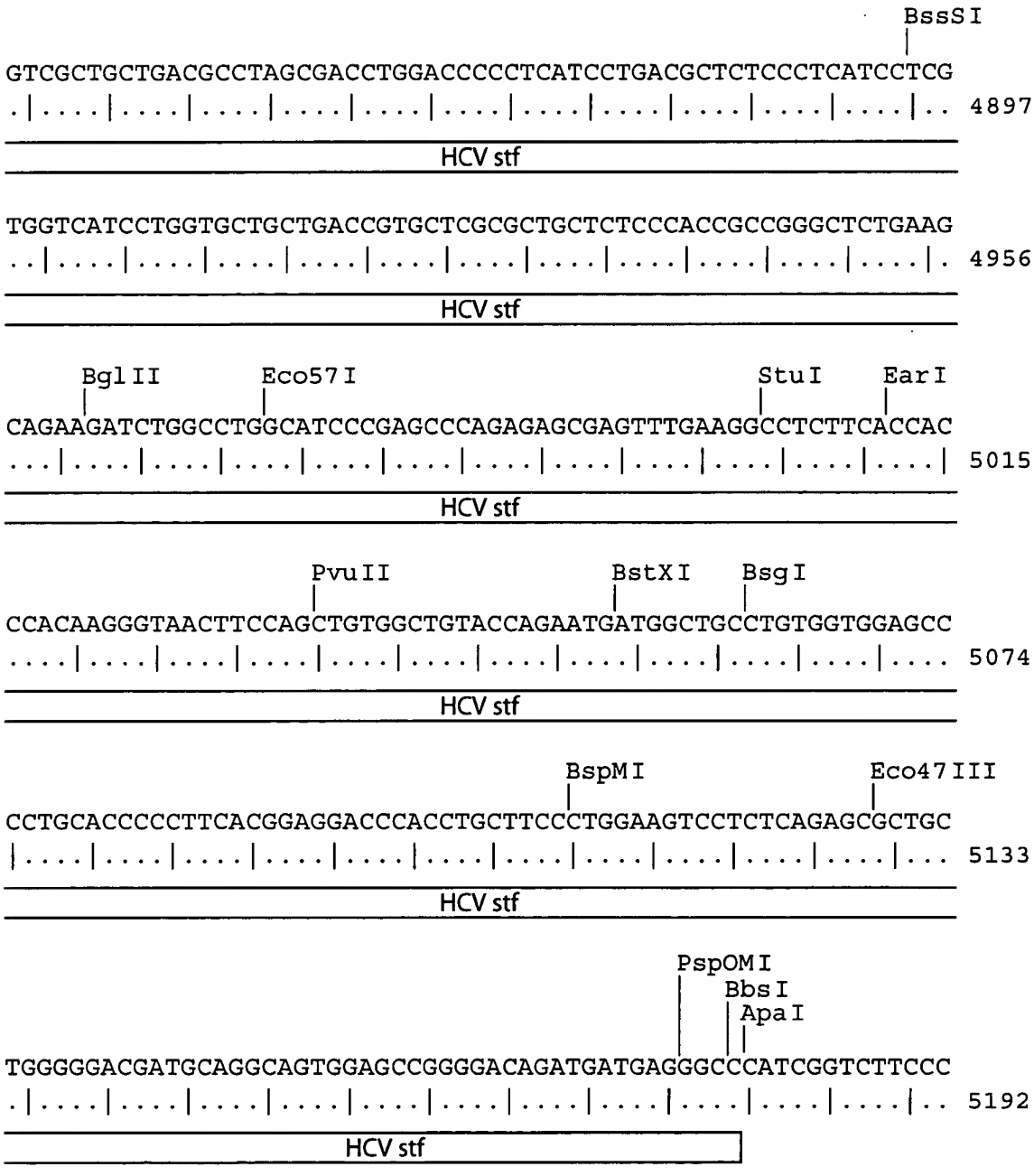
BssSI
GTCGCTGCTGACGCCTAGCGACCTGGACCCCCTCATCCTGACGCTCTCCCTCATCCTCG
4897
HCV stf
TGGTCATCCTGGTGCTGCTGACCGTGCTCGCGCTGCTCTCCCACCGCCGGGCTCTGAAG
4956
HCV stf
BglII
Eco57I
StuI
EarI
CAGAAGATCTGGCCTGGCATCCCGAGCCCAGAGAGCGAGTTTGAAGGCCTCTTCACCAC
5015
HCV stf
PvuII
BstXI
BsgI
CCACAAGGGTAACTTCCAGCTGTGGCTGTACCAGAATGATGGCTGCCTGTGGTGGAGCC
5074
HCV stf
BspMI
Eco47III
CCTGCACCCCCTTCACGGAGGACCCACCTGCTTCCCTGGAAGTCCTCTCAGAGCGCTGC
5133
HCV stf
PspOMI
BbsI
ApaI
TGGGGGACGATGCAGGCAGTGGAGCCGGGGACAGATGATGAGGGCCCATCGGTCTTCCC
5192
HCV stf

Fig. 4P

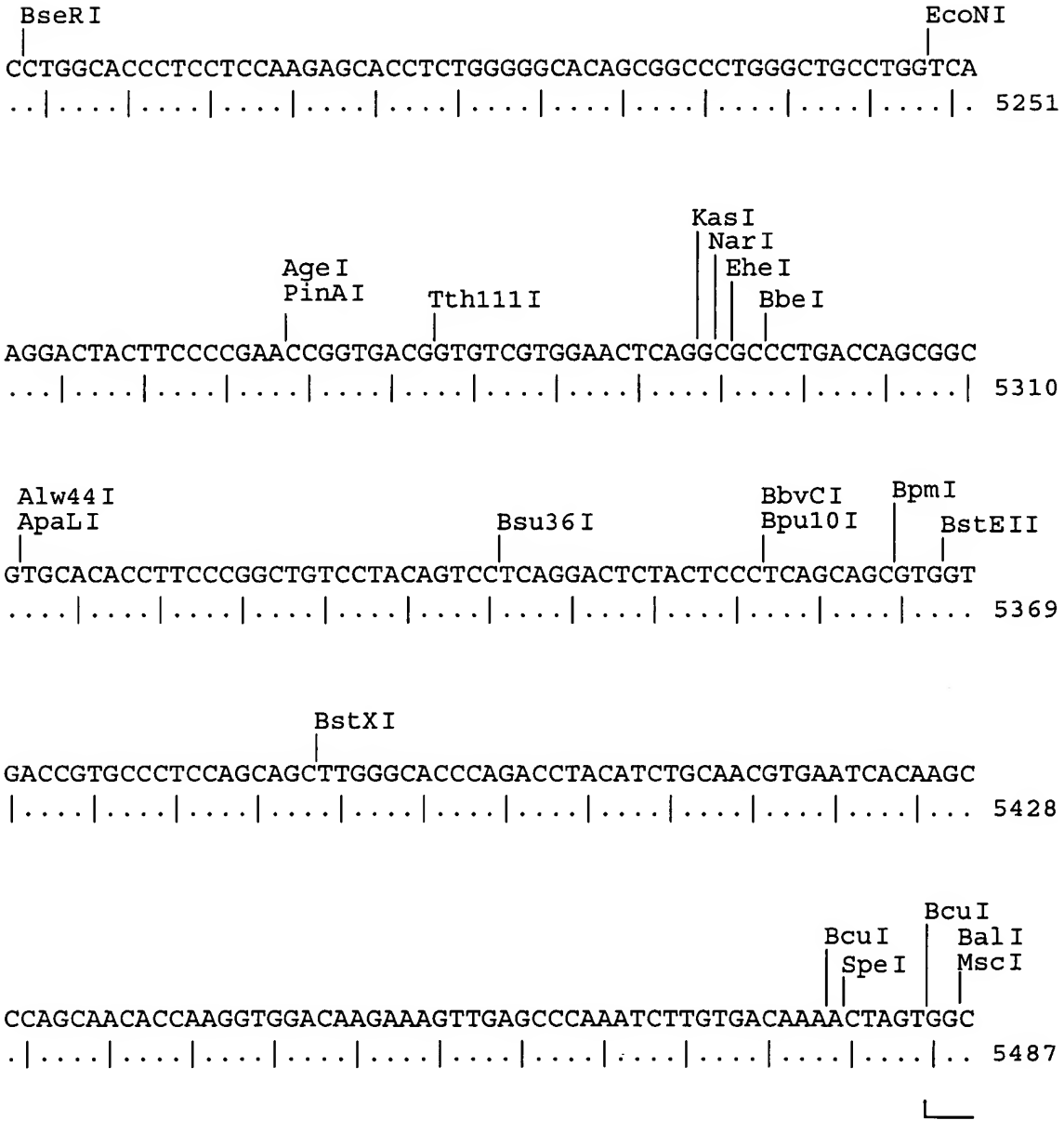
BseR I
EcoN I
CCTGGCACCCTCCTCCAAGAGCACCTCTGGGGGCACAGCGGCCCTGGGCTGCCTGGTCA
5251
Kas I
Nar I
Age I
Pin AI
Tth111 I
Ehe I
Bbe I
AGGACTACTTCCCCGAACCGGTGACGGTGTCGTGGAACTCAGGCGCCCTGACCAGCGGC
5310
Alw44 I
Apa LI
Bsu36 I
BbvC I
Bpu10 I
Bpm I
Bst EII
GTGCACACCTTCCCGGCTGTCCTACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTGGT
5369
Bst XI
GACCGTGCCCTCCAGCAGCTTGGGCACCCAGACCTACATCTGCAACGTGAATCACAAGC
5428
Bcu I
Bcu I
Bal I
Spe I
Msc I
CCAGCAACACCAAGGTGGACAAGAAAGTTGAGCCCAAATCTTGTGACAAAACTAGTGGC
5487

Fig. 4Q


NgoMIV
BglI
SfiI
NaeI
FseI
Bsp19I
NcoI
BstXI
BsiWI
AccIII
CAGGCCGGCCAGCACCATCACCATCACCATGGCGCATACCCGTACGACGTTCCGGACTA
5546
linker
His tag
HA tag
CGCTTCTTAGGAGGGTGGTGGCTATGAGGGTGGCGGTTCTGAGGGTGGCGGCTCTGAGG
5605
st
HA tag
gene III
GAGGCGGTTCCGGTGGTGGCTCTGGTTCCGGTGATTTTGATTATGAAAAGATGGCAAAC
5664
gene III
GCTAATAAGGGGGCTATGACCGAAAATGCCGATGAAAACGCGCTACAGTCTGACGCTAA
5723
gene III
BspDI
ClaI
AGGCAAACTTGATTCTGTCGCTACTGATTACGGTGCTGCTATCGATGGTTTCATTGGTG
5782
gene III

Fig. 4R

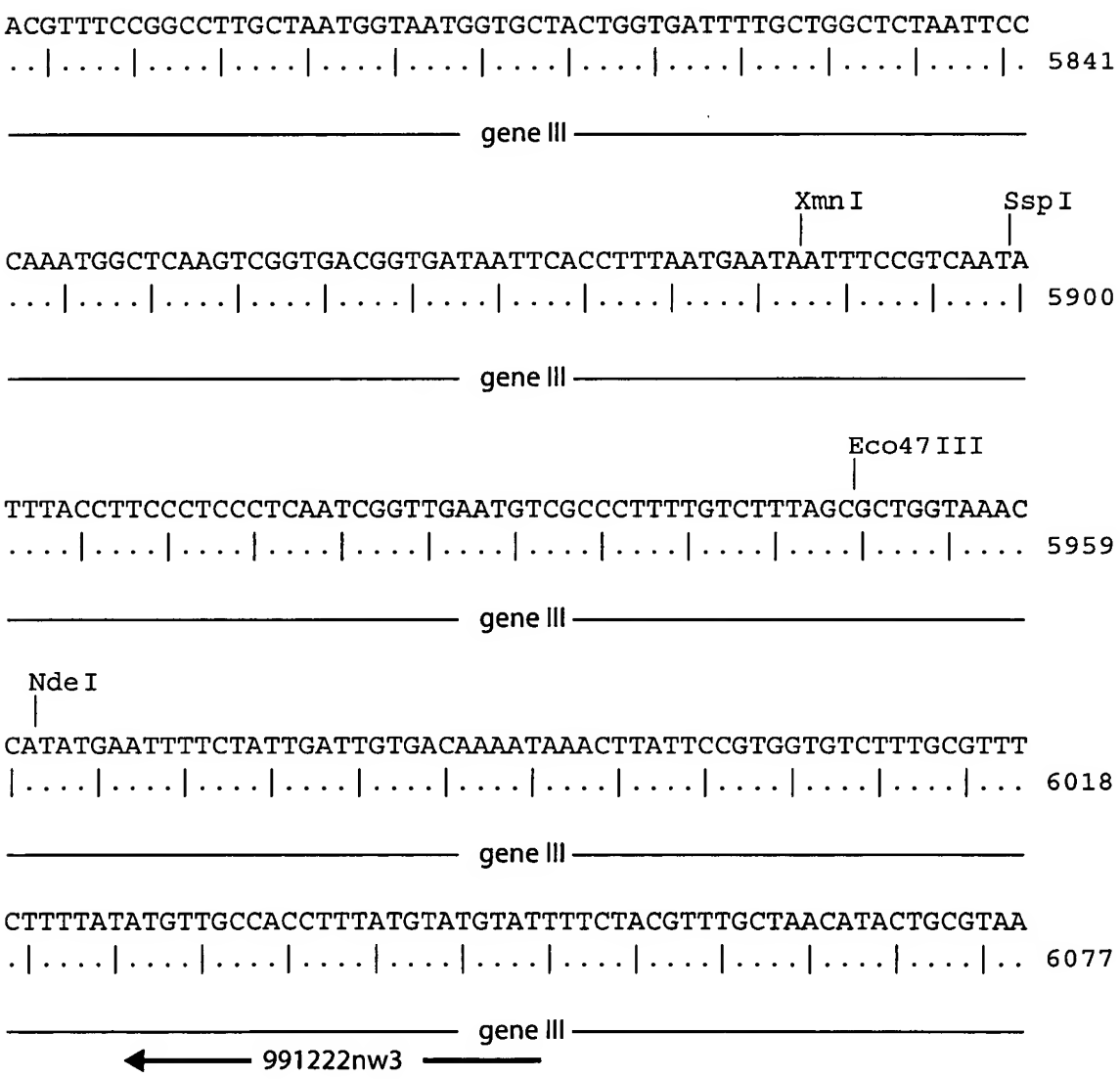
ACGTTTCCGGCCTTGCTAATGGTAATGGTGCTACTGGTGATTTTGCTGGCTCTAATTCC
5841
gene III
XmnI
SspI
CAAATGGCTCAAGTCGGTGACGGTGATAATTCACCTTTAATGAATAATTTCCGTCAATA
5900
gene III
Eco47III
TTTACCTTCCCTCCCTCAATCGGTTGAATGTCGCCCTTTTGTCTTTAGCGCTGGTAAAC
5959
gene III
NdeI
CATATGAATTTTCTATTGATTGTGACAAAATAAACTTATTCCGTGGTGTCTTTGCGTTT
6018
gene III
CTTTTATATGTTGCCACCTTTATGTATGTATTTTCTACGTTTGCTAACATACTGCGTAA
6077
gene III
991222nw3

Fig. 4S

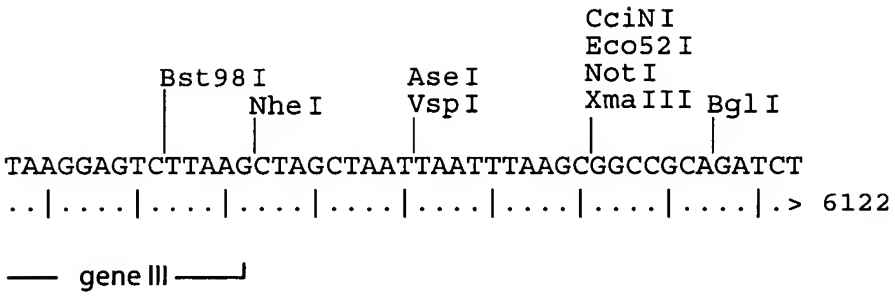
CciNI
Eco52I
Bst98I
AseI
NotI
NheI
VspI
XmaIII
BglI
TAAGGAGTCTTAAGCTAGCTAATTAATTTAAGCGGCCGCAGATCT
..|....|....|....|....|....|....|....|....|.> 6122
gene III

Fig. 4T

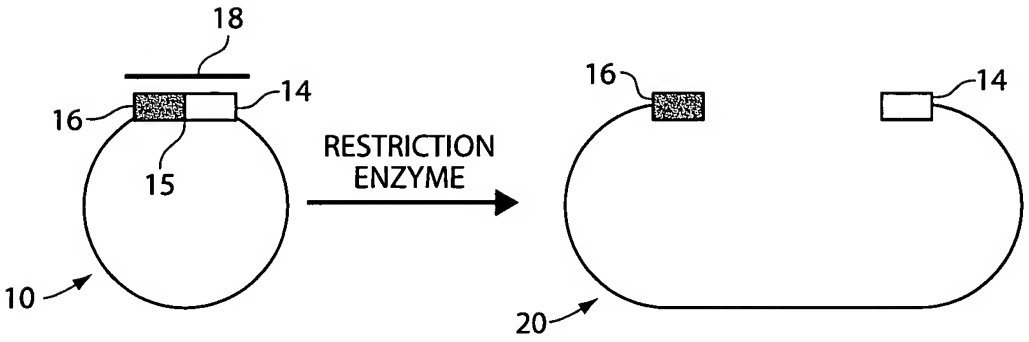

Fig. 5A

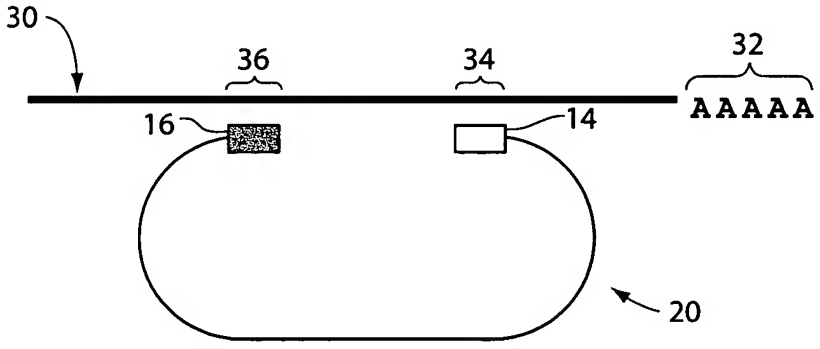

Fig. 5B

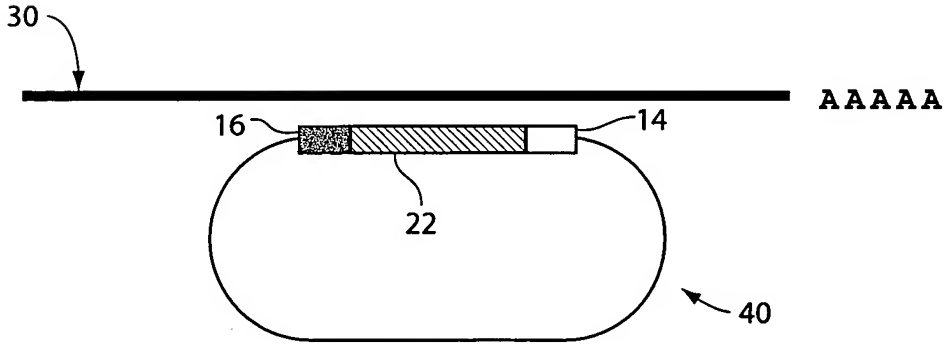

Fig. 5C

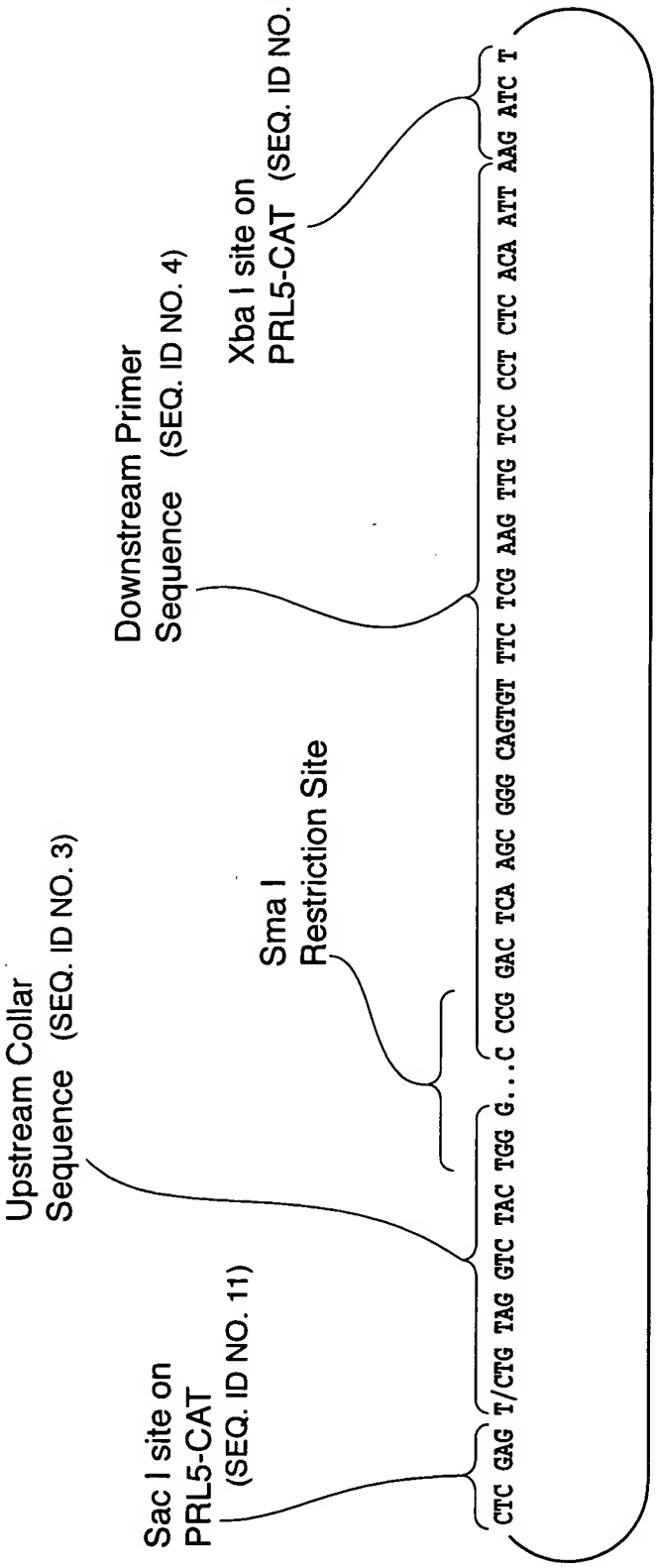
Upstream Collar
Sequence (SEQ. ID NO. 3)
Sac I site on
PRL5-CAT
(SEQ. ID NO. 11)
Sma I
Restriction Site
Downstream Primer
Sequence (SEQ. ID NO. 4)
Xba I site on
PRL5-CAT (SEQ. ID NO. 12)
CTC GAG T/CTG TAG GTC TAC TGG G...C CCG GAC TCA AGC GGG CAGTGT TTC TCG AAG TTG TCC CCT CTC ACA ATT AAG ATC T

Fig. 6A

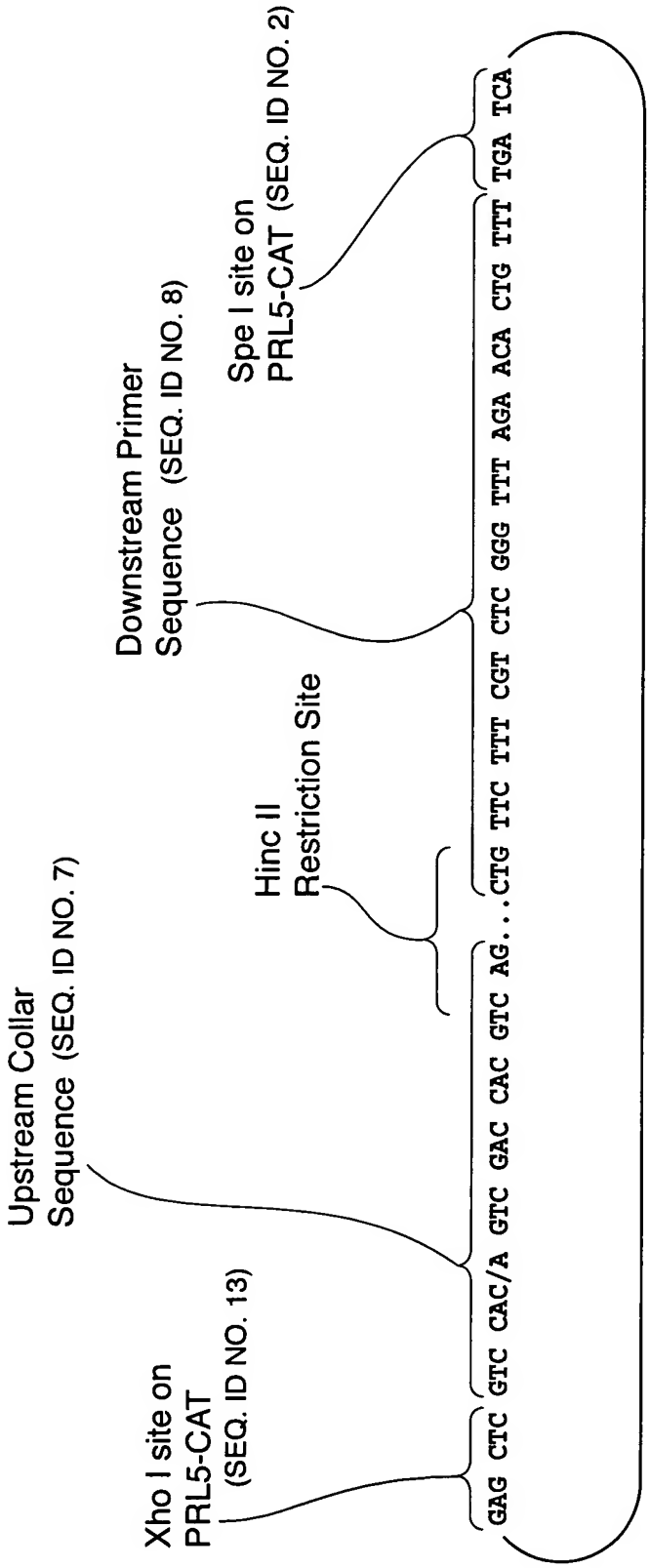
Upstream Collar
Sequence (SEQ. ID NO. 7)
Xho I site on
PRL5-CAT
(SEQ. ID NO. 13)
Hinc II
Restriction Site
Downstream Primer
Sequence (SEQ. ID NO. 8)
Spe I site on
PRL5-CAT (SEQ. ID NO. 2)
GAG CTC GTC CAC/A GTC GAC CAC GTC AG...CTG TTC TTT CGT CTC GGG TTT AGA ACA CTG TTT TGA TCA

Fig.6B

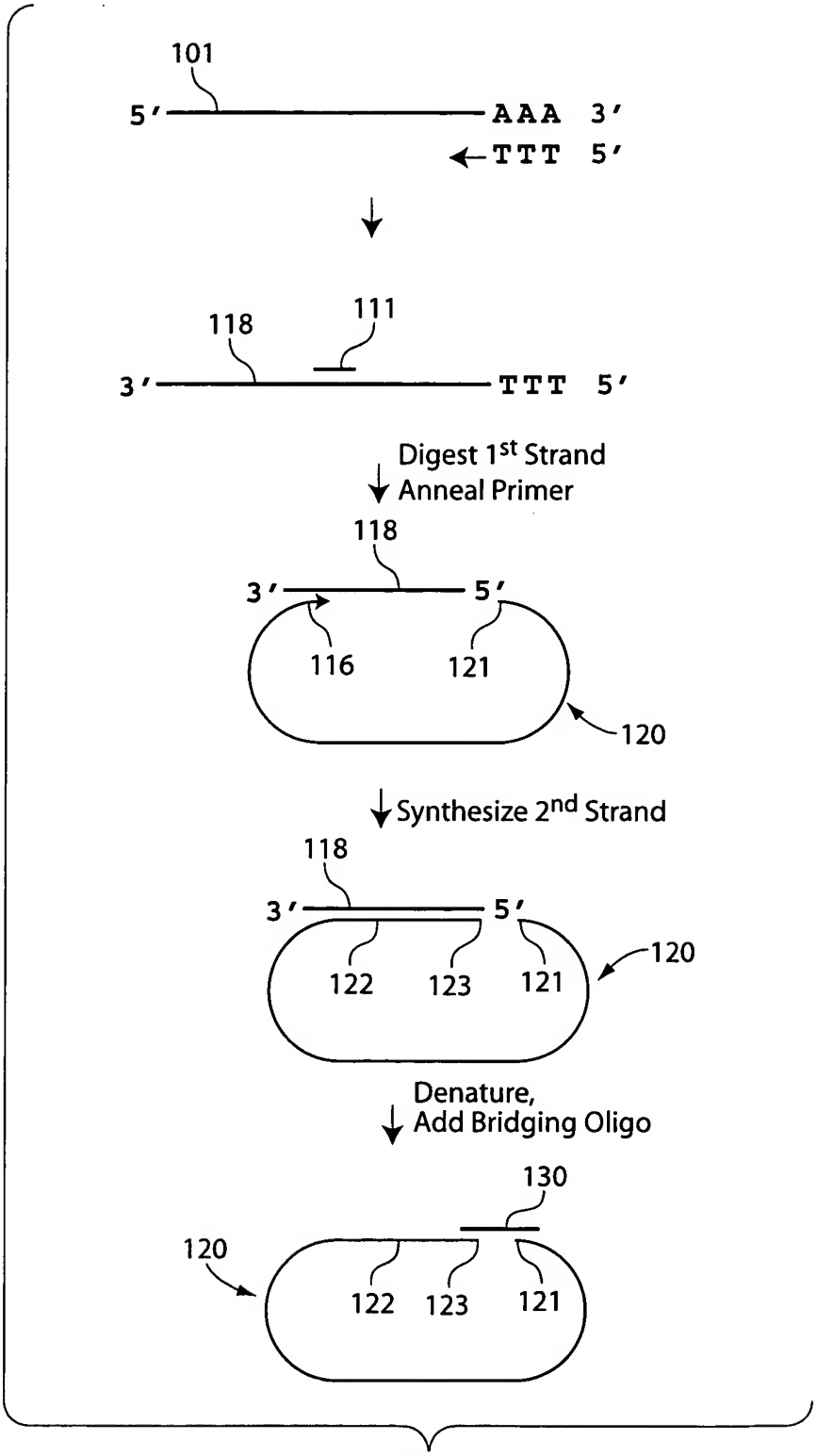
101
5′
AAA 3′
TTT 5′
118
111
3′
TTT 5′
Digest 1st Strand
Anneal Primer
118
3′
5′
116
121
120
Synthesize 2nd Strand
118
3′
5′
122
123
121
120
Denature,
Add Bridging Oligo
130
120
122
123
121

Fig. 7